

ABSTRACT OF SANITARY REPORTS.

VOL. V.

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No. 17.

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UNITED STATES.

SPECIAL REPORTS.

Investigation of the reported endemic of small-pox in Kentucky.

A telegraphic report has been received from Surgeon W. H. Long, M.-H. S., who was directed to relieve Surgeon Fessenden, on account of the latter's illness, and to continue the investigation and report the details of measures being taken by the local and State authorities to prevent the spread of small-pox from Crittenden County, Kentucky. Small-pox was reported as prevalent in said locality, and a request was made for protection by the secretary of the State board of health of Tennessee, acting on official notification from the Kentucky health authorities. (See Abstract of April 18.) Surgeon Long telegraphs, under date of April 23: "The supposed cases of small-pox in Crittenden County, Kentucky, prove to be measles."

Small-pox at Boston quarantine.

Several new cases of small-pox are reported on the bark *Sarah*. Five steerage passengers suffering with the disease have been removed to the hospital at Galloupe's Island, making nine cases in all. The vessel is being cleansed and disinfected. The 150 steerage passengers will be kept under observation for a week or more.

A case of leprosy in Mississippi.

Dr. Wirt Johnston, secretary of the State board of health of Mississippi, at a meeting of the board at Jackson, April 15, read a letter from Doctor Griffin, health officer of Jackson County, reporting a case of leprosy. Steps were taken to advise the board of supervisors of that county, and ask them to isolate the case.

Reports of States, and yearly and monthly reports of cities.

CALIFORNIA.—Month of March, 1890. Reports to the State board of health from 101 cities and towns, having an aggregate population of

855,600, show a total of 1,189 deaths, including phthisis pulmonalis, 233; diphtheria, 13; croup, 15; scarlet fever, 1; measles, 6; whooping-cough, 5; and enteric fever, 23.

CONNECTICUT.—Month of March, 1890. Reports to the State board of health from 168 cities and towns, having an aggregate population of 759,022, show a total of 1,097 deaths, including phthisis pulmonalis, 137; small-pox, 8; measles, 2; scarlet fever, 6; diphtheria and croup, 53; whooping-cough, 7; and enteric fever, 7. *

The *Monthly Bulletin* says:

In the first three months of this year the number of deaths was 971 more than in the first quarter of 1889.

It was 851 more than the average of the deaths in the corresponding quarter for five years before.

This excess occurred almost wholly in January during the prevalence of the epidemic of "la grippe." Although few deaths comparatively were attributed directly to that epidemic, yet its influence upon the results of other diseases can not be doubted.

Physicians even yet recognize an occult influence manifested in the tardy, halting convalescence of their patients from almost all severe illnesses.

The death rate for the large towns was 17.9, for the small towns 16.2, and 17.3 for the whole State.

The deaths from zymotic diseases were 147, being 13.3 per cent. of the total mortality, against 13.1 per cent. in February.

There was no marked difference in total mortality of the zymotic diseases in the last two months, although considerable differences in the special diseases. The deaths from small-pox, measles, cerebro-spinal fever, diphtheria, and croup, and the diarrhoeal diseases were more numerous, while those from scarlet fever, whooping-cough, erysipelas, typhoid fever, and puerperal fever were less.

There was a somewhat severe epidemic of diphtheria in the New Haven County Home for Dependent and Neglected Children, with five fatal results. It is believed that the disease has been arrested.

The epidemic of small-pox at Meriden, reported in the last issue, is thought to be now over in that city.

There were in the two months of February and March 26 cases reported to the health authorities, of whom 10 died.

This was the most extensive and fatal epidemic of small-pox that has ever occurred in any town or city in Connecticut since the organization of the State board of health.

The following statement concerning its origin in Meriden has been reported at this office: A man boarding with a saloon-keeper in Meriden visited Windsor Locks during the prevalence of the disease in that place. After his return he was ill and had an irruption, which was thought so suspicious that he was kept out of view in his rooms until it had disappeared, and advised to say nothing about it. In due time the little daughter of the saloon-keeper was also taken sick and had an irruption, and her physician reported it to the city health committee as varioloid. A consultation with other physicians was held upon the case, and the majority being of opinion that it was chicken-

pox and not varioloid the health committee took no precautions about it. The case was not even kept under observation for the brief time necessary to settle the doubt concerning it.

The experience of Meriden will afford a notable illustration of the importance of immediate notification of every infectious disease, and of the danger of neglecting any cases about which there is reasonable uncertainty of the diagnosis.

It is only right to expect that in future, under the present organization of local boards of health in every town in Connecticut, such attention and care will be given to every real or suspicious case that an extensive and fatal epidemic of small-pox, like the recent one in Meriden, will not soon occur again.

MASSACHUSETTS—Worcester.—Month of March, 1890. Population, 85,000. Total deaths, 143, including phthisis pulmonalis, 19; croup, 2; enteric fever, 1; diphtheria, 2; and measles, 1.

MICHIGAN.—Week ended April 12, 1890. Reports to the State board of health, Lansing, from 44 observers, indicate that cholera infantum, cholera morbus, diphtheria, inflammation of kidneys, remittent fever, inflammation of bowels, whooping-cough, and inflammation of brain increased, and that typhoid fever, typhoid-malarial fever, membranous croup, cerebro-spinal meningitis, pleuritis, and erysipelas decreased in area of prevalence.

Diphtheria decreased by 38 per cent., and was reported at 16 places; scarlet fever decreased by 41 per cent., and was reported at 16 places. Enteric fever was reported at 9 places, and measles at 45 places.

Detroit.—Month of March, 1890. Population, 250,000. Total deaths, 325, including phthisis pulmonalis, 32; croup, 9; diphtheria, 26; enteric fever, 3; measles, 5; and scarlet fever, 5.

MINNESOTA—Minneapolis.—Month of March, 1890. Population, 200,000. Total deaths, 172, including phthisis pulmonalis, 20; diphtheria, 10; measles, 1; scarlet fever, 1; and whooping-cough, 2.

Publication received.

Ninth annual report of State board of health of New York, 1889.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated popula- tion.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Variceloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping- cough.
New York, N. Y.	Apr. 19.	1,609,017	721							1	5	32	31	4
Philadelphia, Pa.	Apr. 12.	1,064,277	406							12	2	6	6	1
Brooklyn, N. Y.	Apr. 19.	859,612	329							2	2	21	5	1
Baltimore, Md.	Apr. 19.	500,343	165							9	1	6	11	2
St. Louis, Mo.	Apr. 12.	450,000	155							1	5	3		
St. Louis, Mo.	Apr. 19.	450,000	132								1	1		3
Boston, Mass.	Apr. 19.	420,000	179									1	12	
San Francisco, Cal.	Apr. 11.	350,000	152							3	1	3	5	1
Cincinnati, Ohio.	Apr. 19.	325,000	115							3		4	1	2
New Orleans, La.	Apr. 12.	254,000	124							1		1		
Detroit, Mich.	Apr. 12.	250,000	68							1	1	7		
Washington, D. C.	Apr. 19.	250,000	106							4		2		
Pittsburgh, Pa.	Apr. 19.	240,000	101							6	3	4	4	
Cleveland, Ohio.	Apr. 5.	240,310	89								1	5	3	
Cleveland, Ohio.	Apr. 12.	240,310	111								1	2	3	1
Louisville, Ky.	Apr. 19.	227,000	53							2		2		
Milwaukee, Wis.	Apr. 19.	210,000	64									7		
Minneapolis, Minn.	Apr. 19.	200,000	40								1	2	2	
Newark, N. J.	Apr. 12.	194,928	90							1	1			1
Newark, N. J.	Apr. 19.	194,928	97										2	
Providence, R. I.	Apr. 19.	130,000	50								1	2	6	
Rochester, N. Y.	Apr. 12.	130,000	52											
Indianapolis, Ind.	Apr. 18.	129,346	20									1		
Richmond, Va.	Apr. 12.	100,000	38											1
Richmond, Va.	Apr. 19.	100,000	35							1		1		
Toledo, Ohio.	Apr. 18.	92,000	24										2	1
Fall River, Mass.	Apr. 19.	69,000	25							1		4		
Nashville, Tenn.	Apr. 19.	68,531	12											
Charleston, S. C.	Apr. 19.	60,145	32											1
Manchester, N. H.	Apr. 19.	43,000	14											
Portland, Me.	Apr. 19.	42,000	9											
Galveston, Tex.	Apr. 4.	40,000	4											
Council Bluffs, Iowa.	Apr. 12.	40,000	4											
Binghamton N. Y.	Apr. 19.	35,000	11											1
San Diego, Cal.	Apr. 9.	32,000	6											
Yonkers, N. Y.	Apr. 18.	31,000	8											
Altoona, Pa.	Apr. 12.	30,000	6											
Auburn, N. Y.	Apr. 12.	26,000	18											
Auburn, N. Y.	Apr. 19.	26,000	12							1			3	1
Newport, R. I.	Apr. 17.	23,000	6										2	
Newton, Mass.	Apr. 19.	22,011	6											
Rock Island, Ill.	Apr. 13.	16,000	3											
Keokuk, Iowa.	Apr. 12.	16,000	2											
Pensacola, Fla.	Apr. 12.	15,000	2							1				

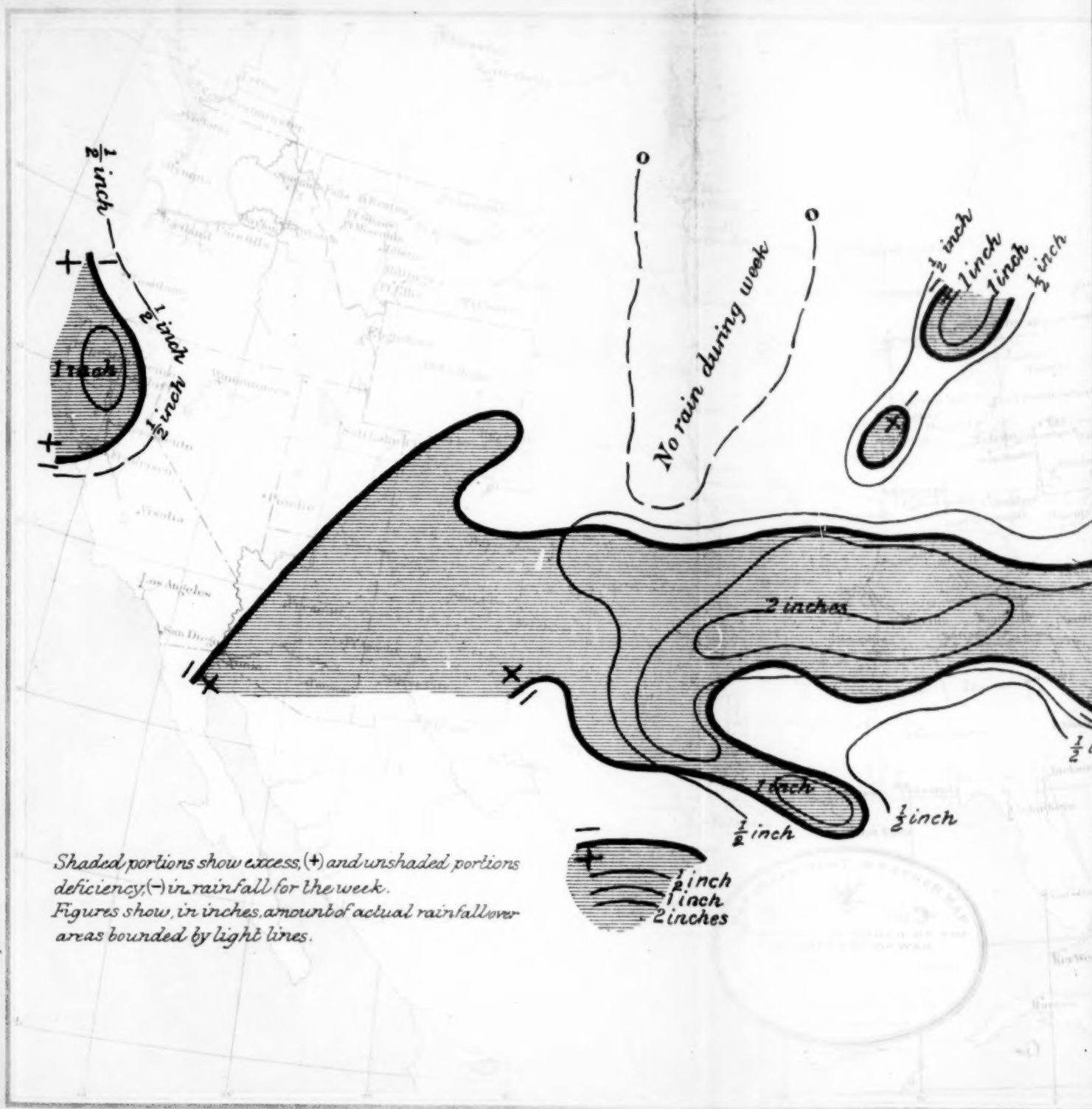
Temperature and precipitation, week ending April 19, 1890.

[Received from the Signal Office, War Department.]

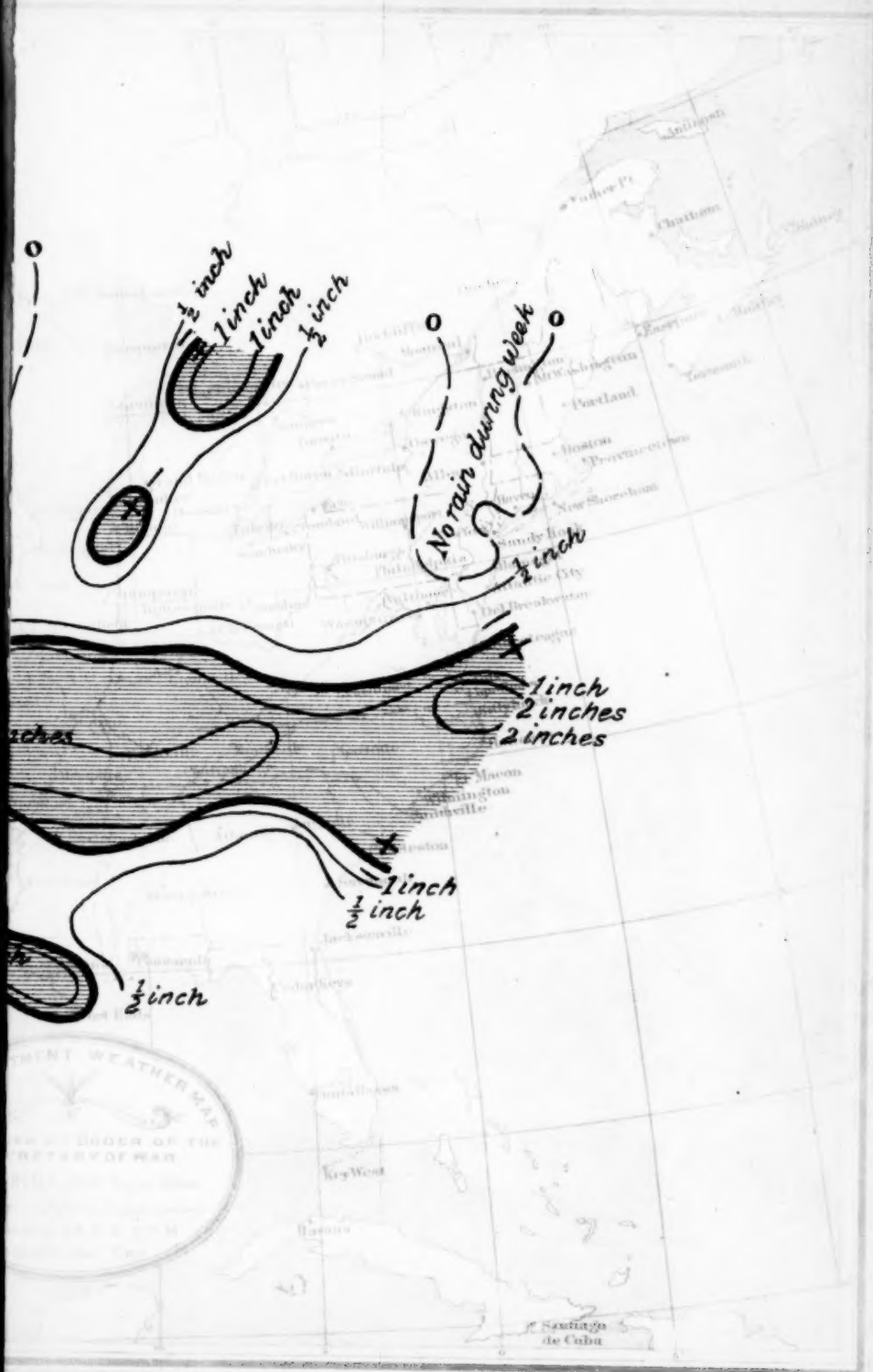
TEMPERATURE.

The week ending April 19 has been warm generally throughout the districts east of the Mississippi and in the Northwest, while about the normal temperature has prevailed on the Pacific coast. In the central Rocky Mountain regions and in Arkansas and Indian Territory the week was cool, although the deficiency in temperature was very slight. Over the greater portion of the cotton region and in the winter wheat States the average daily temperature ranged from 1° to 3° above the normal, while in the middle Atlantic States and Dakota the daily excess in temperature ranged from 3° to 6°.

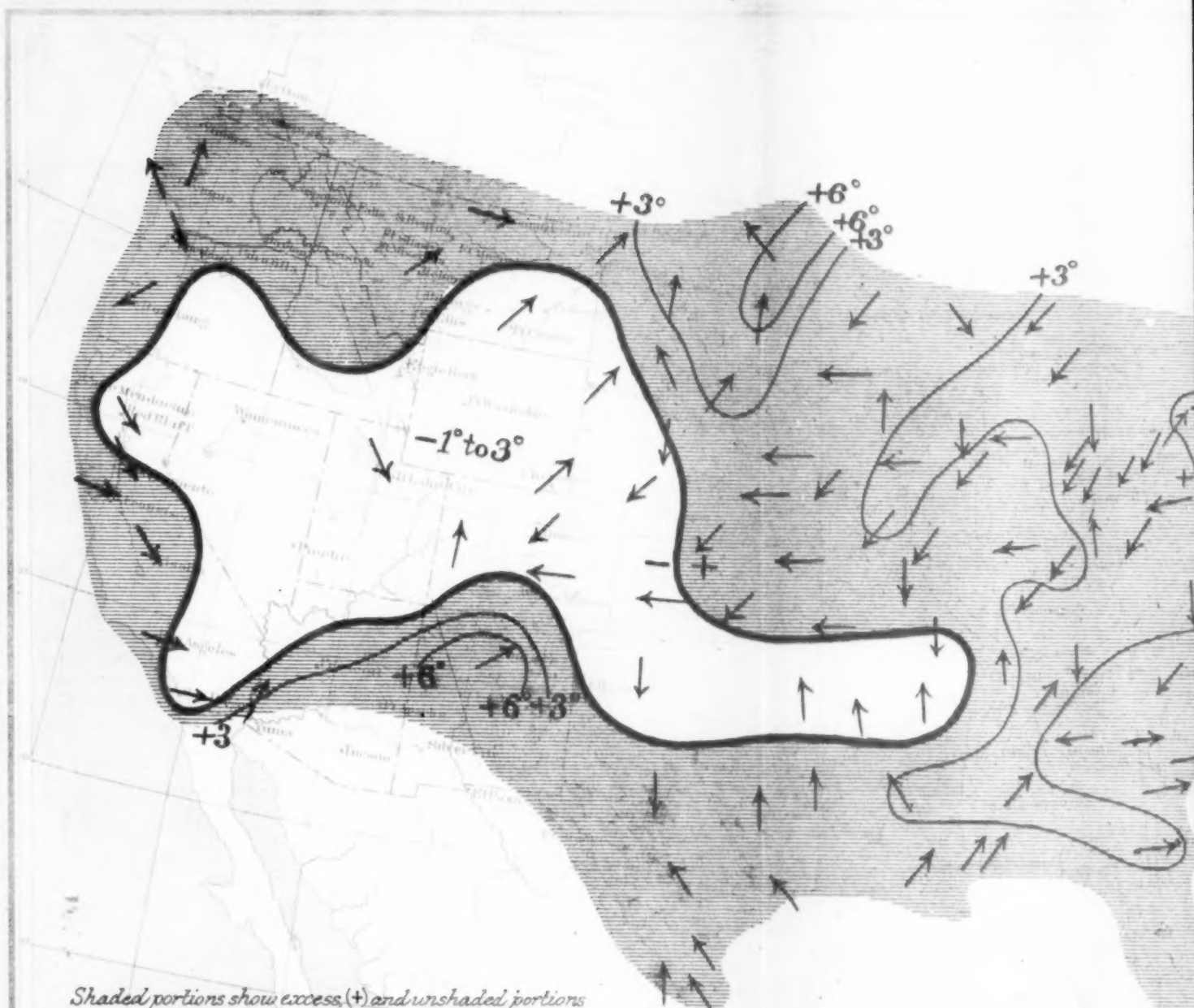
Rainfall, week ending April 18th. 1890.



April 18th. 1890.



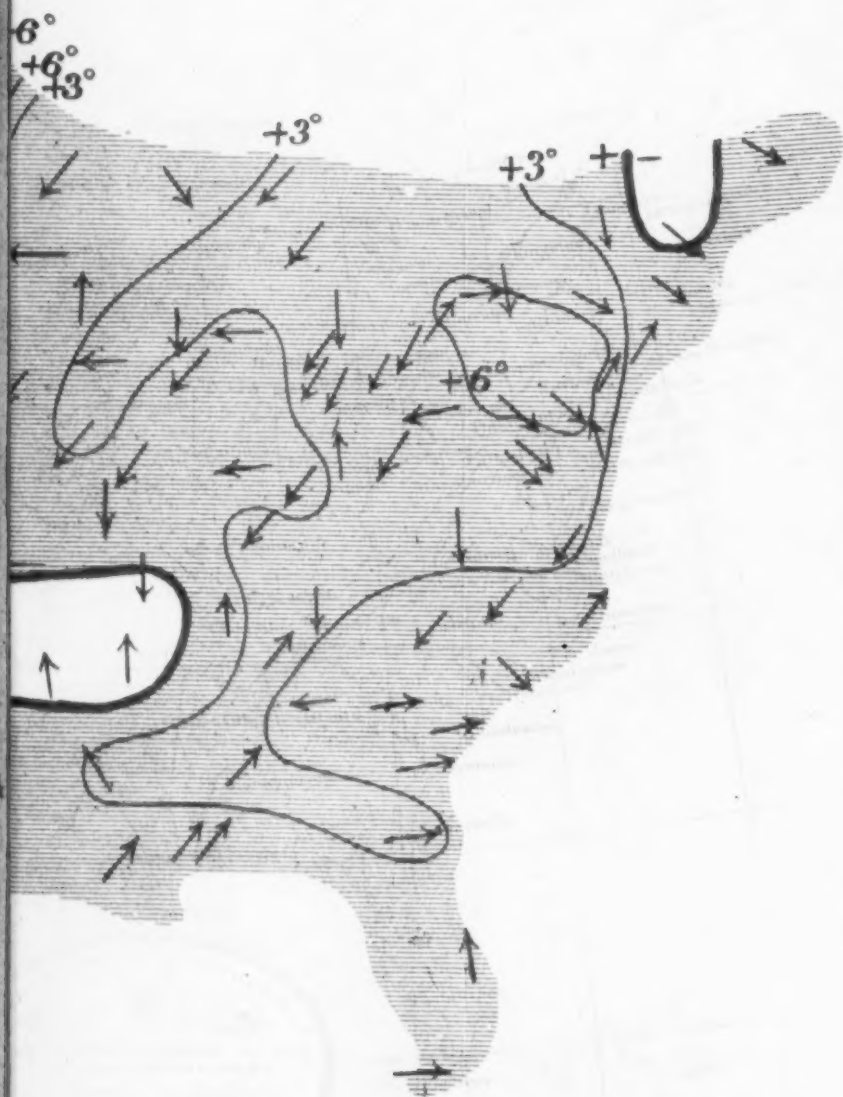
Temperature and Prevailing Direction of Wind, we April 18 1890.



*Shaded portions show excess, (+) and unshaded portions
deficiency (-) of temperature*

*Figures show amount of excess, (+) or deficiency (-) in
temperature over areas bounded by light lines.*

*Direction of Wind, week ending
18 1890.*



The temperature for the season, from January 1 to April 19, continues in excess over the entire region east of the Mississippi, and from Iowa and Nebraska southward to the Gulf coast. The area over which there has been a seasonal excess of temperature is apparently increasing from week to week, and it now includes all agricultural districts east of the Rocky Mountains, except Dakota and portions of Minnesota, Iowa, and Nebraska. The season continues cool on the north Pacific coast, where the daily temperature for the entire period has averaged about 4° below the normal.

PRECIPITATION.

There has been more than the usual amount of rain-fall during the week in southern Virginia and North Carolina, and thence westward over Kentucky, Tennessee, the extreme northern portions of the Gulf States, and still farther westward to New Mexico, including the southern portions of Missouri, Kansas, and Colorado. Heavy rains also occurred in the extreme southern portion of Louisiana and Texas, and local excesses are reported in northern California, northern Illinois, and northern Michigan. Well distributed showers generally occurred over the States of the Ohio Valley and Lake region, and over the greater portion of the east Gulf States, but no rain occurred in Minnesota, eastern Dakota, eastern Nebraska, western Iowa, and over the interior of New England and eastern New York.

The rain-fall for the season continues in excess over the Lake region, the Ohio Valley, Tennessee, Arkansas, northern New England, northern Texas, and on the Pacific coast north of the thirty-fifth parallel. Over the Ohio and central Mississippi valleys the excess of rain-fall for the season ranges from five to ten inches. In the south Atlantic and the southern portion of the east Gulf States the deficiency in rain-fall for the season ranges from five to twelve inches, or in this section less than one-half of the usual rain-fall has occurred since January 1st. Over the wheat region of California the seasonal excess in rain-fall ranges from three to five inches, while in the western portions of Oregon and Washington the excess ranges from six to ten inches.

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended April 5 corresponded to an annual rate of 19.3 a thousand of the aggregate population, which is estimated at 9,715,559. The lowest rate was recorded in Huddersfield, viz, 10.5, and the highest in Manchester, viz, 28.6 a thousand. Diphtheria caused 2 deaths in Sheffield, 2 in Manchester, and 5 in Salford.

London.—One thousand four hundred and nineteen deaths were registered during the week, including measles, 35; scarlet fever, 8; diphtheria, 20; whooping-cough, 84; enteric fever, 2; and diarrhoea and dysentery, 10. The deaths from all causes corresponded to an annual rate of 16.7 a thousand. Diseases of the respiratory organs caused 296 deaths. In greater London 1,852 deaths were registered, corresponding to an annual rate of 16.8 a thousand of the population. In the "outer ring" the deaths included measles, 11; diphtheria, 9; and whooping-cough, 23.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended April 5, in the 16 principal town districts of Ireland, was 25.3 a thousand of the population. The lowest rate was recorded in Dundalk, viz, 4.4, and the highest in Waterford, viz, 34.7 a thousand. In Dublin and suburbs 180 deaths were registered, including measles, 6; enteric fever, 4; whooping-cough, 5; influenza, 1; and diphtheria, 1.

Scotland.—The deaths registered in eight principal towns during the week ended April 5 corresponded to an annual rate of 24.1 a thousand of the population, which is estimated at 1,345,563. The lowest mortality was recorded in Greenock, viz, 18.4, and the highest in Glasgow, viz, 27.0 a thousand. The aggregate number of deaths registered from all causes was 624, including measles, 47; scarlet fever, 3; diphtheria, 6; whooping-cough, 33; fever, 9; and diarrhoea, 7.

FRANCE—*Marseilles.*—Month of March, 1890. Population, 375,378. Total deaths, 1,145, including small-pox, 40; enteric fever, 13; diphtheria and croup, 23; measles, 7; whooping-cough, 7; and diarrhoea and enteritis, 47.

BRAZIL—*Bahia.*—The United States consul writes as follows, under date of March 6, 1890:

I have the honor to report the health of this city and the surrounding country good. Influenza prevailed to some slight extent, but it was

very light. Two deaths have occurred from it. There is still a complaining of the drought in the interior:

Rio de Janeiro.—Week ended March 15, 1890. Population, 450,000. Total deaths, 346, including yellow fever, 40; small-pox, 9; enteric fever, 9; and typhus fever, 20. The United States consul says: "There is some increase of yellow fever, but the disease is not epidemic."

Week ended March 22. Total deaths, 291, including yellow fever, 33; small-pox, 1; enteric fever, 6; and typhus fever, 12.

Week ended March 29. Total deaths, 346, including yellow fever, 50; enteric fever, 7; and typhus fever, 12. "There was some increase of deaths from yellow fever in the early part of the week. It is not epidemic, and recent rains will probably decrease the number of cases."

DUTCH GUIANA—*Paramaribo*.—Month of February, 1890. Population, 27,752. Total deaths, 81, including none from contagious diseases.

BAHAMAS—*Nassau, N. P.*—Week ended April 12, 1890. City very healthy. Weather hot and dry.

CUBA—*Havana*.—Week ended April 10, 1890. One death from yellow fever was reported.

During the month of March, 1890, there were 567 deaths, including yellow fever, 4; so-called pernicious fever, 7; enteric fever, 9; diphtheria and croup, 5; and glanders, 2.

Santiago de Cuba.—The United States consul reports, under date of April 12, as follows:

Inclosed please find health returns and death-rate statistics for last half of February, 1890. It is surprising and pleasing to note that not one case of yellow fever occurred during that period. The health of the city and jurisdiction, notwithstanding the inclement weather and poor sanitary regulations, is amazingly good. I have dispatched all vessels from here with clean bills of health, but the responsibility in signing bills of health is too great, as it is impossible for me to determine and know the health of the crews when every one around me tries to conceal the facts of the actual health on board.

Sanitary report from February 15 to 28.

SANTIAGO DE CUBA, April 11, 1890.

Diseases.	White.	Colored.	Troops.	Total.
Pernicious fever.....		1		1
Remittent fever.....	1			1
Cerebral congestion.....	1			1
Cerebral hemorrhage.....	1			1
Tubercular meningitis.....		1		1
Diphtheria.....	1			1
Croup.....	2			2
Pulmonary tuberculosis.....	2	3		5
Aneurism.....		1		1
Valvular insufficiency of the heart.....		4		4
Cancer.....		1		1
Enteritis.....		2		2
Enteroliths.....		1		1
Cholera infantum.....	1			1
Acute hepatitis.....	1			1
Fracture of the head.....	1			1
Infantile tetanus.....		2		2
Old age.....	1			1
Vicious insertion of the placenta.....	1			1
Total.....	14	16		30

AZORES—*Small-pox at San Miguel.*—The following letter has been received from the United States consul at Fayal, under date of March 29, 1890:

I had the honor to report to you, on January 30, the appearance of small-pox at the island of San Miguel (St. Michael's), and to say that on obtaining particulars they should be transmitted. But the reports thus far have been so conflicting that I am able only to state that the disease exists at that island, and that passengers from that locality are being quarantined at this place as they come on the semi-monthly mail steamers that run between these islands and Lisbon.

No case has made its appearance on this island up to date.

Health report from Santa Cruz de Teneriffe, Canary Islands.

The following extract is from a report to the Surgeon-General of the United States Army, by Lieut. Stephen C. Mills, Twelfth Infantry:

Thinking the mortality records for the district of Puerto Orotava might prove of interest, as showing the general health conditions, I obtained, through the kindness of Dr. George Perez, the death record from 1884 to 1888, inclusive, and append tables showing the number of deaths and the percentage per thousand and the number of deaths under five years of age, between five and ten years, ten and twenty years, and so on. I also give the number of deaths caused each year by certain maladies. I have taken those which I thought bore on the conditions which cause people to seek health resorts, as well as some which explain a sudden increase in the death rate. The tables are appended.

The Doctors Perez assert that they have never yet seen a case of enteric fever which originated in Orotava.

The most common diseases in Puerto Orotava seem to be diarrhoea and a low malarial fever. The natives use the water brought from the mountains in ditches.

The present winter, spent on this island, is the first one in several years in which I have not had a bad cold in my head or a sore throat. A visit to Madeira brought both with an amazing rapidity. I find that other people have the same experience.

The three hours just after sunset are considered by the natives the most dangerous time to be out, and during those hours they wrap up.

"La grippe" has invaded the island, but the cases are few in number and not serious.

The great drawback to Puerto Orotava is the lack of sunshine. The mornings are usually clear until between 9 and 10 o'clock, then the sun is obscured by the strata of cloud which hangs at an altitude of from thirty-five hundred to six thousand feet above the peak. It usually leaves about sunset, and the nights are clear. According to the Orotava enthusiasts this "fleece umbrella" tempers the heat of the sun by day, and is a blessing to the place. It undoubtedly robs them of what many people want, the sunshine, and reflecting back the heat rising from the earth gives you a feeling of oppression and closeness far from agreeable. It is too much like breathing under a blanket. On the other hand, it provides superb sunset effects.

* * * * *

It has its pleasant days and its dull days, and it lacks the luxuries of long established health resorts. But one can live in all comfort, and they will find a place warmer, drier, and less malarious than Florida, without the sudden variations of southern California, without the moisture and the heavy dews of the Bahamas, with no danger of cold winds such as visit the Riviera and the Mediterranean coast, and with less change and much less relaxing than Madeira.

A place where you can be, with comfort, out of doors more hours in a day more days in the winter than in any of those I have named, and where the conditions are the best I have seen for helping to restore the injured throat and lungs.

Table showing number of deaths per year under certain ages from 1884 to 1888, inclusive, in the district of Puerto Orotava, Tenerife.

[Compiled from official register of deaths. Deaths of foreign visitors not included. Population, 5,000.]

Ages.	1884.	1885.	1886.	1887.	1888.	Total.
Deaths under the age of 5 years.....	49	43	25	28	55	200
Over 5 and under 10.....	6	3	.....	3	4	16
Over 10 and under 20.....	5	6	3	2	7	23
Over 20 and under 30.....	3	4	5	2	4	18
Over 30 and under 40.....	1	2	3	5	9	20
Over 40 and under 50.....	3	5	6	2	8	24
Over 50 and under 60.....	7	4	4	2	4	21
Over 60 and under 70.....	12	9	3	7	8	39
Over 70 and under 80.....	3	9	6	8	13	39
Over 80 and under 90.....	8	9	4	9	14	44
Over 90 and under and over 100.....	2	3	1	4	1	11
Totals.....	99	97	60	72	127	455
Number of deaths in 1,000 persons.....	19.8	19.4	12.0	14.4	25.2	18.2

Table showing number of deaths from certain maladies in Puerto Orotava, Teneriffe, Canary Islands, 1884 to 1888, inclusive.

Maladies.	1884.	1885.	1886.	1887.	1888.
Pneumonia.....	4	12	6	3	8
Catarrh.....	7	.....	.....	1	1
Heart disease.....	10	3	1	2	5
Apoplexy.....	10	4	3	2	3
Phthisis.....	4	10	9	3	12
Typhoid fever.....	1	1	.....	.....	.....
Bronchitis.....	5	11	6	4	7
Diphtheria.....	9	.....	2	4	.....
Old age.....	2	2	2	7	6
Inanition.....	5	7	8	7	14
Measles.....	.....	.....	.....	.....	6
Eclampsia.....	3	3	.....	.....	5
Enterocolitis.....	4	1	1	1	5
Gastro-enteritis.....	2	1	2	2	10

The phagocyte theory of Metschnikoff.

[Translated for this Bureau from *La Rivista Internazionale d'Igiene*, Naples, 1890.]

According to this theory, the property possessed by certain cells, especially the leucocytes, of incorporating and destroying bacteria that penetrate the body, is augmented, for bacteria of the same species, after the first invasion. This theory has strong probability in its favor. Microscopic observation has demonstrated that the bacillus anthracis, the coccus of erysipelas, the spirillum of relapsing fever, and other bacteria are incorporated and destroyed by the phagocytes. But we may be allowed the question: If the bacteria incorporated by the phagocytes are living and in a condition to menace the health of the organism, why are they not vital and capable of resistance when incorporated? Nuttall's observations demonstrate that a great number of infectious bacilli may be destroyed by the fluids of the body, independently of the cell, so that it is possible the phagocytes absorb only dead bacteria, consequently that they do not possess the property of liberating the body from living, exciting causes of infection. The justice of this objection is proved by the critical observations of the phagocyte theory made by Bitter. He is far from denying the importance of the theory, but he requires a demonstration that the phagocytes can incorporate living pathogenic bacteria, endowed with vital energy, and that the biologic activity of these bacteria remains intact without the intervention of the cell.

This question, which from the point of view of immunity is one of actual and pressing importance, has been made the subject of rigid investigation by Flügge and his school.

MORTALITY TABLE—FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—							
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.
London.....	Apr. 11.....	5,758,000	1852	.....	.....	.....	.....	2	12	29	46
Glasgow.....	Apr. 5.....	545,678	275	.....	.....	.....	.....	5	1	1	22
Warsaw.....	Mar. 29.....	445,832	238	.....	.....	9	.....	.....	4	13	.....
Calcutta.....	Mar. 1.....	433,219	283	25	44	.....	.....	.....	.....	1	1
Amsterdam.....	Mar. 22.....	406,402	164	.....	.....	.....	.....	1	1	8	.....
Amsterdam.....	Mar. 29.....	406,402	171	.....	.....	.....	.....	2	.....	7	.....
Rotterdam.....	Apr. 5.....	203,486	104	.....	.....	.....	.....	.....	.....	.....	.....
Trieste.....	Mar. 29.....	158,054	100	.....	.....	.....	.....	1	.....	2	.....
Stuttgart.....	Apr. 5.....	125,510	45	.....	.....	.....	.....	.....	.....	7	.....
Havre.....	Mar. 29.....	112,074	59	.....	.....	.....	.....	.....	.....	.....	3
Pernambuco.....	Mar. 11.....	120,000	94	.....	.....	2	.....	1	1	.....	.....
Pernambuco.....	Mar. 18.....	120,000	77	.....	.....	4	1	1	2	.....	.....
Vera Cruz.....	Apr. 3.....	23,800	29	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz.....	Apr. 11.....	23,800	26	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar.....	Mar. 30.....	23,681	11	.....	.....	.....	.....	.....	.....	.....	.....
Flushing, Neth.....	Apr. 5.....	12,793	3	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas.....	Mar. 7.....	13,500	17	.....	.....	.....	.....	.....	.....	.....	2
St. Thomas.....	Mar. 14.....	13,500	11	.....	.....	.....	.....	.....	.....	.....	2
St. Thomas.....	Mar. 21.....	13,500	18	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.